

Atty. Dkt. No. 039153-0484 (G1190)

REMARKS

Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

No claims are requested to be cancelled.

Claims 1, 2, 4, 5, 6, 7, 8, 9, 10, 12, 14, and 15 are currently being amended. No new matter is added.

No claims are being added.

This amendment changes claims in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claim(s) remain under examination in the application, is presented, with an appropriate defined status identifier.

After amending the claims as set forth above, claims 1-20 remain pending in this application.

On pages 2-4 of the Office Action, claims 1-4, 7-16, and 18-20 are rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,429,493 (Asahina). The Examiner states:

Referring to figures 1-7, Asahina et al. teaches a method of using an adhesion precursor in an integrated circuit fabrication process, the method comprising:

Forming a trench . . . in a dielectric layer providing a first gas over a dielectric material (20) to form a continuous barrier adhesion precursor layer (29 . . . depositing the layer by using CVD . . . providing a second gas including an alloy agent over the adhesion precursor layer to provide a copper layer over the continuous barrier layer

Applicants respectfully traverse the rejection.

Atty. Dkt. No. 039153-0484 (G1190)

Amended independent claims 1, 5, 7, 9, 10, and 15 recite processes of varying claim scopes and include a feature related to a blending layer. The blending layer includes three components: an initial metal layer, a copper containing material, and an alloying element of Sn, In, Zn, and Cr. Applicants respectfully submit that the oxide layer of Asahina is not a blending layer as recited in claims 1, 5, 7, 8, 9, 10, and 15. Accordingly, it is respectfully submitted that independent claim 1 and its dependent claims 2-4 and independent claim 5 and its dependent claim 6, independent claim 7 and its dependent claim 8, independent claim 9, independent claim 10 and its dependent claims 11-14, and independent claim 15 and its dependent claims 16-20 are patentable over the Asahina.

On pages 4 and 5 of the Office Action, claims 5-6 and 17 are rejected under 35 U.S.C. § 103 over Asahina in view of U.S. Patent No. 6,181,012 (Edelstein). The Examiner states:

The reference does not teach forming a second gas includes [sic] tin . . . Edelstein teaches forming a barrier layer (72), forming a second gas of a second material (76) . . . wherein the second gas includes tin, forming a copper allow layer and then planarizing.

Applicants respectfully traverse the rejection.

Applicants respectfully submit that Edelstein does not provide for the deficiencies of Asahina. Applicants respectfully submit that the seed layer of Edelstein is not a blending layer. The seed layer does include the initial metal layer followed by a copper containing layer and an alloying element as recited in the claims. Accordingly, it is respectfully submitted that independent claim 1 and its dependent claims 2-4 and independent claim 5 and its dependent claim 6, independent claim 7 and its dependent claim 8, independent claim 9, independent claim 10 and its dependent claims 11-14, and independent claim 15 and its dependent claims 16-20 are patentable over the cited art. Edelstein and Asahina are referred to below as the cited art.

Applicants believe that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

Atty. Dkt. No. 039153-0484 (G1190)

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 06-1447. Should no proper payment be enclosed herewith, as by a check or credit card payment form being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 06-1447. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. § 1.136 and authorizes payment of any such extensions fees to Deposit Account No. 06-1447.

Respectfully submitted,

Date

7-13-2006

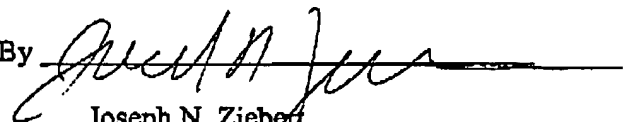
FOLEY & LARDNER LLP

Customer Number: 26371

Telephone: (414) 297-5768

Facsimile: (414) 297-4900

By



Joseph N. Ziebert

Attorney for Applicant

Registration No. 35,421